

# Minor Venereal Diseases In the United States

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CHANCROID, lymphogranuloma venereum, and granuloma inguinale, the so-called minor venereal diseases, have declined markedly in the United States during the past 10 years.

This downward trend for the period 1946-55, depicted in the chart, is based on the number of cases of each of the minor venereal diseases reported to health departments in the continental United States. Reported cases of primary and secondary syphilis are included as a basis for comparing the rate of decline of the other venereal diseases.

Although the decline rates of the minor venereal diseases are of lesser magnitude than the 94 percent for primary and secondary syphilis, they are quite impressive.

The 10-year period subsequent to 1945 provides a reasonably uniform population upon which to base a trend. The number of civilian cases reported prior to this period was affected by the large proportion of young adults in the military services.

In probing the factors that may have contributed to the decline, consideration will be given to diagnostic procedures, contact investigation, and specific therapy of cases and contacts. Opinions regarding control procedures which may have influenced the trend were obtained from questionnaires submitted to venereal disease control officers in the 10 States from which the greatest numbers of cases were reported during the 1946-55 period.

## Chancroid

Chancroid, the most prevalent of the minor venereal diseases during the decade under consideration, declined 68 percent. However, the use of definitive bacteriological methods for the

diagnosis of chancroid has been the exception rather than the rule in most clinics in this country, and this diagnosis usually represents a clinical impression reached after excluding syphilis. The designation of chancroid may therefore be considered as a convenient wastebasket category for nonsyphilitic ulcerative lesions of the genitalia.

At least one study of ulcerative genital lesions occurring in epidemic form among American soldiers in Japan has indicated that organisms other than *Haemophilus ducreyi* are capable of producing lesions of the genitalia resembling chancroid (1). Japanese workers (2) have reported that organisms bearing a morphologic resemblance to *H. ducreyi* were commonly found in prostitutes and that these could be easily mistaken for *H. ducreyi* with which they have no immunological relationship.

As mentioned above bacteriological methods are infrequently employed in the diagnosis of chancroid although their superiority to clinical criteria has been demonstrated repeatedly. Studies during the past decade in this country confirm earlier reports that smears may be expected to detect approximately 50 percent of infections, while cultures, the diagnostic procedure of choice, will identify 75 percent or more (3, 4). Although the skin test is positive in approximately 70 percent of cases, the limited sensitivity of this test during the early stages of infection and the persistence of a positive reaction after recovery make the skin test of limited value in early diagnosis. For this reason, it is presently used only to a limited extent in venereal disease clinics in this country.

There are no reports in the recent literature indicating that contact investigation has either been widely applied or has achieved any degree of success in controlling this disease. Our own experience in identifying sources of chancroid infection has been disappointing. Female sexual contacts of our male patients generally reveal neither genital lesions nor organisms resembling *H. ducreyi*. Reasons for this situation are not clear. In spite of the reduced incidence of chancroid we still lack basic information regarding the natural history of this disease. The comparatively rare observation of clinical manifestations of this disease in the

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female remains to be explained and suggests that it exists in a latent form that is capable of inciting active clinical disease when transmitted to the male. This possibility is further suggested by the report that approximately one-third of Negro hospital patients over 25 years of age had positive skin reactions although most of them denied ever having had ulcerative genital lesions (5). This finding is confirmed by our own experience.

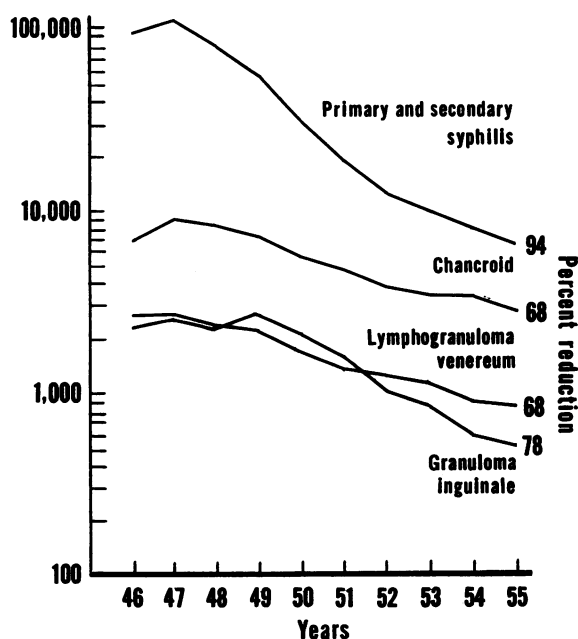
Chemotherapy, employing the sulfonamides, streptomycin, chloramphenicol, or the tetracycline antibiotics, has made the treatment of this disease simple and effective. Failure to respond to such medication should result in questioning of the diagnosis. The sulfonamide drugs and streptomycin are more widely used in view of their lower cost and lack of a tendency to mask a syphilitic infection.

#### Lymphogranuloma Venereum

The decline of 68 percent in the incidence of lymphogranuloma venereum during the last decade may be considered somewhat remarkable in view of the fact that, as for chancroid, identification of sources of infection has not been a routine practice in most clinics. Furthermore, doubt exists as to whether infectiousness is controlled by therapy, no matter how effective the therapy may be in resolving signs of the disease.

The diagnosis and management of lymphogranuloma venereum are handicapped by the difficulty of identifying the etiological agent by ordinary procedures and by the limitations of the Frei test and the complement fixation test in differentiating past from present infection. According to reports from a number of American cities, Frei tests performed upon adult Negro patients in the wards of general hospitals were positive for 40 to 50 percent (6). The proportion showing positive complement fixation tests is even higher (7), suggesting that the complement fixation test is less specific than the Frei test. Also, a number of workers have reported a lack of correlation between these two tests (8, 9). A high percentage of patients who are positive to both tests deny ever having had any of the typical clinical manifestations of lymphogranuloma venereum.

**Trend in number of reported cases of primary and secondary syphilis and the minor venereal diseases, continental United States, 1946-55.**



NOTE: Percentage reduction by 1955 derived from the highest figures during the first half of the decade. Basic data from VD Fact Sheet, PHS Pub. No. 341, December 1955, table 5, p. 9.

This suggests that subclinical infection is extremely common and that it probably has constituted a reservoir of infection. Under these conditions, the Frei test and the complement fixation test are of little value in tracing sources of infection. If the decline in reported cases of lymphogranuloma venereum is also reflected in a lower prevalence of positive skin tests and complement fixation tests, these tests may prove to be of greater value in the future in identifying sources of infection.

Another reason for the limited attempts to identify sources of infection of known cases of lymphogranuloma venereum is the uncertainty that specific chemotherapy can make such persons noninfectious (8). Results of a number of studies designed to determine whether the etiological agent of the disease can be isolated from experimental animals or humans subsequent to specific chemotherapy raise considerable doubt that eradication of organisms is achieved with regimens of therapy now in use (10, 11). This leads one to wonder whether factors other than the making of patients non-

infectious by therapy have played a role in the decline of lymphogranuloma venereum, although this factor cannot be disregarded, since isolation of the infectious agent from tissue does not necessarily indicate infectiousness.

Satisfactory clinical response to therapy is readily achieved by administration of the sulfonamide drugs, chloramphenicol, or the tetracycline antibiotics. Due to the greater cost of the tetracycline antibiotics, the sulfonamide drugs are widely employed in public clinics, and there is no evidence that they are inferior to the tetracycline antibiotics. Both forms of medication have been increasingly employed for the treatment of the anorectal syndrome (12) with gratifying results, frequently making drastic surgical procedures unnecessary.

### Granuloma Inguinale

The decline of 78 percent in granuloma inguinale during the past decade is of considerable magnitude. As with chancroid and lymphogranuloma venereum, credit for this decline cannot be given to efforts to identify sources of infection and to administer specific therapy to them. Granuloma inguinale is rarely encountered in sexual contacts, in spite of the chronic nature of the ulcerative lesions and the continued presence of the etiological agent, *Donovania granulomatis*, in the lesions. This suggests a low degree of communicability.

The question has been frequently raised as to whether granuloma inguinale is truly a venereal disease. In spite of its equal distribution between the sexes, there is little epidemiological evidence of its venereal transmission. The possibility that granuloma inguinale represents an autoinfection from a fecal organism has been postulated from time to time (13, 14) and must be considered as a possible explanation of the origin of the disease, at least until better evidence of its sexual transmission is forthcoming.

Diagnosis of granuloma inguinale by demonstrating *D. granulomatis* in smears is a simple procedure. A high degree of success follows therapy with streptomycin, chloramphenicol, or the tetracycline antibiotics. Of interest is the increasing number of reports of granuloma inguinale of the cervix which have appeared in the recent literature (15, 16). This

condition is frequently mistaken for carcinoma, but it has a far better prognosis and responds readily to specific therapy.

### Discussion

The downward trend in the minor venereal diseases, chancroid, lymphogranuloma venereum, and granuloma inguinale, during the past decade has been gratifying. It is hoped that this is not a false picture created by the reduction of case-finding programs following the curtailment of funds for venereal disease control during the period 1946-55. If the decline can be assumed to be a real one, it cannot be attributed to vigorous efforts to identify and treat sources of infection since such measures have been the exception rather than the rule. The venereal disease control officers questioned, as well as the writer, are of the opinion that the following factors have contributed to the improved picture:

1. Widespread use of sulfonamide drugs and antibiotics for other diseases may have reduced the reservoir of latent infectious cases of the minor venereal diseases.
2. Improved personal hygiene practices following exposure to infection may have resulted from the educational efforts of the Armed Forces during World War II.
3. Improved socioeconomic circumstances in this country during the past decade may have influenced predisposing factors, such as family breakdown and prostitution.
4. A successful attack has been waged against organized prostitution, which undoubtedly helped to propagate these diseases.

Notwithstanding this improved situation, there are still many gaps in our knowledge of the natural history of the minor venereal diseases.

### Summary

The downward trend of the minor venereal diseases, chancroid, lymphogranuloma venereum, and granuloma inguinale, during the decade 1946-55 has been of considerable magnitude although less than that of primary and secondary syphilis. The sharper decline of the latter may reflect more complete epidemiological knowledge, more intensive efforts in contact

investigation, and more effective therapeutic weapons. This is the consensus of venereal disease control officers questioned regarding the factors believed to play a role in the decline of the minor venereal diseases.

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## Clearinghouse for Poison Control Centers

A national clearinghouse for poison control centers has been set up by the Public Health Service in line with requests for such services by the American Academy of Pediatrics and the American Public Health Association. A part of the Accident Prevention Program of the Division of Special Services, the clearinghouse will achieve limited operation by midsummer, providing consultative services and case analyses.

Full operations of the new service will include interchanging information among local control centers; stimulating prevention and treatment of poison cases; encouraging research; aiding in the establishment of poison control centers; studying trends in poisoning accidents; and acting as a repository of information.

Staff for the clearinghouse will include a pediatrician, a doctor of pharmacy or a pharmacologist, and an educational specialist.